

AMENDMENTS TO THE CLAIMS:

1. (CURRENTLY AMENDED) A device for delivering at least one fuel additive to a fuel upon immersion in the fuel, said device comprising an ion-exchange resin having an equilibrium constant whereby ion exchange occurs in response to chemical equilibrium forces sufficient to effectuate an exchange, and to which a fuel additive is ~~removably~~ reversibly bound by a chemical interaction, wherein the ion-exchange resin is selected from the group consisting of anionic exchange resins and cationic exchange resins having acidic and/or basic groups located on the resin, and wherein the fuel additive is at least partially removed from the ion-exchange resin by means of a chemical interaction in exchange for a component in the fuel which reversibly binds to the ion-exchange resin.
2. (ORIGINAL) The device of claim 1, wherein the fuel is selected from the group consisting of gasoline, middle distillate fuel, diesel, bio diesel, kerosene, and mixture thereof or precursors thereof.
3. (CANCELED)
4. (ORIGINAL) The device of claim 1, wherein the ion-exchange resin is selected from the group consisting of anionic exchange resins.
5. (ORIGINAL) The device of claim 1, wherein the ion-exchange resin is selected from the group consisting of cationic exchange resins.
6. (CANCELED)
7. (CURRENTLY AMENDED) The device of claim 1, wherein the fuel additive is at least partially removed from the ion-exchange resin by means of a chemical reaction through reversible exchange with a contaminant in the fuel.

8. (CANCELED)
9. (PREVIOUSLY AMENDED) The device of claim 7, wherein the contaminant in the fuel is an impurity.
10. (CANCELED)
11. (ORIGINAL) The device of claim 1, wherein the fuel additive is selected from the group consisting of lubricity additives, combustion improvers, detergents, dispersants, cold flow improvers, dehazers, demulsifiers, cetane improvers, antioxidants, scavengers, and pollution suppressants.
12. (ORIGINAL) The device of claim 1, wherein the fuel additive comprises a manganese-containing compound.
13. (ORIGINAL) The device of claim 1, wherein the device further comprises a permeable membrane through which fuel can permeate into the device and the fuel additive can permeate out of the device.
14. (ORIGINAL) A machine having an engine, said machine comprising the device of claim 1.
15. (ORIGINAL) A vehicle containing the device of claim 1.
16. (ORIGINAL) The vehicle of claim 15, wherein the vehicle is selected from the group consisting of cars, trucks, buses, aircraft, trains, recreation vehicles, water craft, and fuel-powered engines.
17. (CURRENTLY AMENDED) A device for supplying an additive to a fuel and adapted to release the fuel additive into said fuel at a controlled rate upon immersion of the device in the fuel, said device comprising:
a fuel-permeable housing assembly defining a chamber; and

an ion-exchange resin having an equilibrium constant whereby ion exchange occurs in response to chemical equilibrium forces sufficient to effectuate an exchange, disposed within said chamber to which a fuel additive is ~~removably~~ reversibly bound by a chemical interaction, wherein the ion-exchange resin is selected from the group consisting of anionic exchange resins and cationic exchange resins having acidic and/or basic groups located on the resin, and wherein the fuel additive is at least partially removed from the ion-exchange resin ~~by means of a chemical interaction~~ in exchange for a component in the fuel which reversibly binds to the ion-exchange resin.

18. (CURRENTLY AMENDED) A method for supplying a fuel additive to a fuel comprising: ~~providing to~~ immersing in a fuel supply an ion-exchange resin having an equilibrium constant whereby ion exchange occurs in response to chemical equilibrium forces sufficient to effectuate an exchange, selected from the group consisting of anionic exchange resins and cationic exchange resins having acidic and/or basic groups located on the resin to which is ~~removably~~ reversibly bound a fuel additive; chemically displacing the fuel additive from the ion-exchange resin ~~by means of replacing the additive on the ion-exchange resin with a material in the fuel means of a chemical interaction~~ in exchange for a component in the fuel which reversibly binds to the ion-exchange resin, whereby the fuel additive is released in to the fuel.

19. (CURRENTLY AMENDED) A system for supplying an additive to a fuel and adapted to release the fuel additive into said fuel at a controlled rate, said system comprising:

an ion-exchange resin having an equilibrium constant whereby ion exchange occurs in response to chemical equilibrium forces sufficient to effectuate an exchange, to which a fuel additive is ~~removably~~ reversibly bound by a chemical interaction, wherein the ion-exchange resin is selected from the group consisting of anionic exchange resins and cationic exchange resins having acidic and/or basic groups located on the resin, and wherein the fuel additive is at least partially removed from the ion-exchange resin ~~by means of a chemical interaction~~ in exchange for a component in the fuel which reversibly binds to the ion-exchange resin;

a fuel supply vessel containing said resin; and
fuel.